


Algebra Curriculum Bundle # 2

Title		Suggested Dates
Manipulating Equations		Sept 14 – Oct 2 (14 days)

Big Idea/Enduring Understanding	Guiding Questions
Equations arise from functional relationships and can be used to predict and solve for specific values in a problem situation.	<ol style="list-style-type: none"> 1. What does the solution of an equation or inequality mean in the problem situation? 2. Is there a pattern or process of manipulating symbols used to solve equations or inequalities? 3. What are the various models used to solve equations and when would you choose to use each model?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the District Curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)	
PSAT sample problems intended for use as warm-ups starting on Sept 17th can be found in the campus shared folder called “PSAT Math Preparation 2009-10” (10th and 11th grade only)			
<p>A.7 The student formulates equations and inequalities based on linear functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation.</p> <p>A.7B The student investigates methods for solving linear equations and inequalities using concrete models, graphs, and the properties of equality, selects a method, and solves the equations and inequalities.</p> <p><i>Note: focus on solving using models, and properties of equality – repeated with graphing in bundle 6; one step equations is covered in bundle 1.</i></p>	<ul style="list-style-type: none"> • Choose an appropriate method for solving a particular linear equation/inequality. • Be able to use all methods (models, graphs, properties of equality,) to solve equations/inequalities • Relate and connect the methods to each other. • Use concrete and pictorial models 	<p>Holt: Section 2.1 – 2.5, 2.1 lab, 2.2 lab, 2.3 lab Sections 3.1 – 3.6, 3.6 lab</p> <p>Discovering: Section 2.8, 3.6, 5.5</p>	<p>A&M: Fall Section 2.1 – 2.5</p> <p>Mathsnet.net “Equation Buster” interactive activity</p> <p>TI.com: A Boolean Look at Inequalities</p>

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<p>A.4 The student understands the importance of the skills required to manipulate symbols in order to solve problems and uses the necessary algebraic skills required to simplify algebraic expressions and solve equations and inequalities in problem situations.</p> <p>A.4A The student finds specific function values, simplifies polynomial expressions, transforms and solves equations, and factors as necessary in problem situations.</p> <p>Note: focus on transforming and solving equations – repeated in bundle 9,10 for polynomials and factoring</p>	<ul style="list-style-type: none"> • Investigations with and without a graphing calculator • Combine like terms to simplify expressions. • Focus on conceptual understanding rather than computation skills. • Evaluate a function at a particular given value for x. • Transform equations from standard form to slope-intercept form. 	<p>Holt: Section 2.1 – 2.5, 2.1 lab, 2.2 lab, 2.5 lab Sections 3.1 – 3.6, 3.6 lab</p> <p>Discovering: Section 2.8, 3.6, 5.5</p>	<p>Dana Center Recycling Geothermal Energy</p>
<p>A.7 The student formulates equations and inequalities based on linear functions, uses a variety of methods to solve them, and analyzes the solutions in terms of the situation.</p> <p>A.7C For given contexts, the student interprets and determines the reasonableness of solutions to linear equations and inequalities.</p>	<ul style="list-style-type: none"> • Determine if the solution(s) of the equation/inequality and the problem situation is reasonable. 	<p>Holt: Section 2.1 – 2.5, 2.1 lab, 2.2 lab, 2.5 lab Sections 3.1 – 3.6, 3.6 lab</p> <p>Discovering: Section 2.8, 3.6, 5.5</p>	<p>Dana Center Greetings Taxi Ride</p> <p>A&M: Fall Section 3.1</p>
<p>A.4 Foundations for Functions. The student understands the importance of the skills required to manipulate symbols in order to solve problems and uses the necessary algebraic skills required to simplify algebraic expressions and solve equations and inequalities in problem situations.</p> <p>A.4C The student connects equation notation with function notation, such as $y = x + 1$ and $f(x) = x + 1$</p> <p>Note: repeated in bundle 4 and 9</p>	<ul style="list-style-type: none"> • Compare advantages/disadvantages of both notations and when to use them. 	<p>Incorporate into other resources</p>	